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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,358	07/29/2003	Joseph J. Bergmeister	33606US02	5327

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EXAMINER	
CHOI, LING SIU	
ART UNIT	**PAPER NUMBER**
1713	

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/629,358	BERGMEISTER ET AL.	
	Examiner	Art Unit	
	Ling-Siu Choi	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/03/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Application is a Continuation of US Application Serial No. 09/773,294, filed January 31, 2001, now US Patent No. **6,642,324**, which is a Division of US Application No. 09/203,094, filed December 1, 1998, now US Patent No. **6,201,077**.

2. This Office Action is in response to the Preliminary Amendment filed April 9, 2001, Claims 1-11 were canceled and claims 12-25 have been added. Claims 12-25 are now pending.

Claim Rejections - 35 USC § 102

3. **The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:**

> **A person shall be entitled to a patent unless --**
> **(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.**
> **(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.**

4. Claims 12 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Badley et al. (US 5,599,887).

A polymerization catalyst comprising	
chromium on a support	**chromium** (about 0.5 to 5 wt % based on the weight of the support)
	support comprising silica and titanium (about 3.5 to about 10 wt % based on the weight of the support) and having a **surface area** from about **400** to **about 800 m^2/g** and a **pore volume** from about **1.8** to **about 4 cm^3/g**

(summary of claim 12)

Badley et al. disclose a catalyst which comprises chromium compound on a support, the amount of chromium compound being from about 0.5 wt % to about 5 wt % % based on the combined weight of the chromium compound and the support; the support being composed of about 80 to about 100 % silica with the remainder being titania and having surface area from about 50 m^2/g to about 500 m^2/g and pore volume from about 0.5 cm^3/g to about 2.5 cm^3/g (col. 3, lines 18-19, 36-51; claim 1-2, 5, 7, 9, 11, and 21-22). Thus, the present claims are anticipated by the disclosure of Badley et al.

5. Claims 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Badley et al. (US 5,599,887).

Badley et al. disclose a catalyst which comprises chromium on a support, the amount of chromium being from about 0.5 wt % to about 5 wt % % based on the combined weight of the chromium compound and the support; the support being

composed of about 80 to about 100 % silica with the remainder being titania and having surface area from about 50 m^2/g to about 500 m^2/g and pore volume from about 0.5 cm^3/g to about 2.5 cm^3/g, wherein the **catalyst is activated with an oxygen-containing ambient at a temperature from about 932°F to about 1292°F** (col. 3, lines 18-19, 36-51; col. 4, lines 31-37, lines 46-50; claim 1-2, 5, 7, 9, 11, and 21-22). Thus, the present claims are anticipated by the disclosure of Badley et al.

6. Claims 15-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Badley et al. (US 5,599,887).

Badley et al. disclose a catalyst which comprises chromium compound on a support, the amount of chromium compound being from about 0.5 wt % to about 5 wt % % based on the combined weight of the chromium compound and the support; the support being composed of about 80 to about 100 % silica and **0 to 20 % titania** and **having surface area from about 50 m^2/g to about 500 m^2/g** and **pore volume from about 0.5 cm^3/g to about 2.5 cm^3/g**, wherein the amount of chromium compound is preferably from about **1 to 4 wt%** and most preferably from **1 to 3 wt%** based on the combined weight of the chromium compound and the support (col. 3, lines 18-19, 36-51, **61-67**; col. 4, lines **1-2**; claim 1-2, 5, 7, 9, 11, and 21-22). Thus, the present claims are anticipated by the disclosure of Badley et al.

7. Claims 24-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Badley et al. (US 5,599,887).

A polymerization catalyst comprising	
chromium on a support	**chromium** (about 0.5 to 5 wt % based on the weight of the support)
	support comprising silica and titanium (about 3.5 to about 10 wt % based on the weight of the support) and having a **surface area** from about **400** to **about 650 m^2/g** and a **pore volume** from about **2** to **about 2.7 cm^3/g**

(summary of claim 24)

Badley et al. disclose a catalyst which comprises chromium on a support, the amount of chromium being from about 0.5 wt % to about 5 wt % % based on the combined weight of the chromium compound and the support; the support being composed of about 80 to about 100 % silica with the remainder being titania and having **surface area from about 50 m^2/g to about 500** m^2/g and **pore volume from about 0.5 cm^3/g to about 2.5 cm^3/g**, wherein the **catalyst is activated with an oxygen-containing ambient at a temperature from about 932°F to about 1292°F** (col. 3, lines 18-19, 36-51; col. 4, lines 31-37, lines 46-50; claim 1-2, 5, 7, 9, 11, and 21-22). Thus, the present claims are anticipated by the disclosure of Badley et al.

8. Claims 12-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Knudsen et al. (US 5,115,053).

Knudsen et al. disclose a catalyst comprising a chromium compound and a silica-titania cogel, wherein the cogel contains **titanium in the range of about 0.1 to**

about 10 wt %, based on the weight of the cogel; the catalyst contains **chromium in the range of about 0.1 to about 20 wt %**, based on the weight of the azeotrope-dried xerogel, and has a **pore volume in the range of about 2.0 to about 2.8 cc/gm** and a surface area in the range of about 300 to about 400 m^2/gm, wherein the catalyst is activated at a temperature in the range of about 300°C to about 1000°C in an oxidizing atmosphere (col. 3, lines 4-10; claims 27, 29-30, and 34). Thus, the present claims are anticipated by the disclosure of Knudsen et al.

9. Claims 12-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Debras et al. (US 6,200,920).

Debras et al. disclose a titanated and supported chromium-based catalyst, wherein the support comprises silica and titania and has a specific surface area of **at least 400 m^2/g**, preferably from 450 to 600 m^2/g, more preferably from 475 to 550 m^2/g and a pore volume **greater than 1 cm^3/g**, more preferably from 1 to 3 cm^3/g, yet more preferably from 1.3 to 2.5 cm^3/g; the catalyst comprises **0.5 to 3 wt % of chromium** and **1 to 5 wt % titanium**; and the catalyst is activated at a temperature of from 500°C to 900°C (col. 4, lines 18-51; col. 5, lines 24-30, 39-42). Thus, the present claims are anticipated by the disclosure of Debras et al.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Wu, can be reached on 571-272-1114

LING-SUI CHOI
PRIMARY EXAMINER

May 25, 2005